

fernalld Report

June 1998

- Message from Jack Craig
- Silos Project Update
- On-Site Disposal Facility contract awarded



Commitment to meeting our Waste Pit milestones

We didn't expect the cleanup of 1 million tons of waste pit material to be easy and we haven't been disappointed. Last month, a potential roadblock may have been removed when a federal appeals court overturned a Texas District Court's issuance of an injunction and required dismissal of a lawsuit challenging DOE's regulatory approach to low-level radioactive waste disposal. This injunction stood in the way of awarding a contract to a

facility to accept our waste. Despite this potential storm which had been looming on the horizon for months, we have remained focused on meeting the Environmental Protection Agency milestone to start processing waste from the pits by March 1, 1999.

To recap this project it's easiest to break it down into four distinct elements. The first was completed in October 1997, when an Alternate Remedial Action Subcontracting Approach (ARASA) subcontract was awarded to International Technology Corporation (IT). This eight-year, \$122 million project, will be paid to IT based on their ability to deliver waste that has been processed and is ready for shipment.

Part two is establishing a contract with a permitted commercial disposal facility to accept our waste. This is a competitive bidding process in which not only Fernald waste, but other waste within the Ohio Field Office will be considered in order to obtain a better price. This step can now be pursued vigorously and should be completed by August 1998.

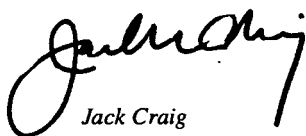
The third element is the procurement of a rail carrier that will transport the waste from Fernald to its final destination. This is expected by January 1999.

Part four is the purchase of gondola cars and the infrastructure improvements necessary to support this large-scale, waste processing, packaging and shipping operation. Much of this work has already been completed. Nearly \$10 million has been spent building a new rail yard, maintenance building and other support structures. Of the \$8.6 million we expect to spend on new railcars, \$3.2 million in contracts has already been awarded.

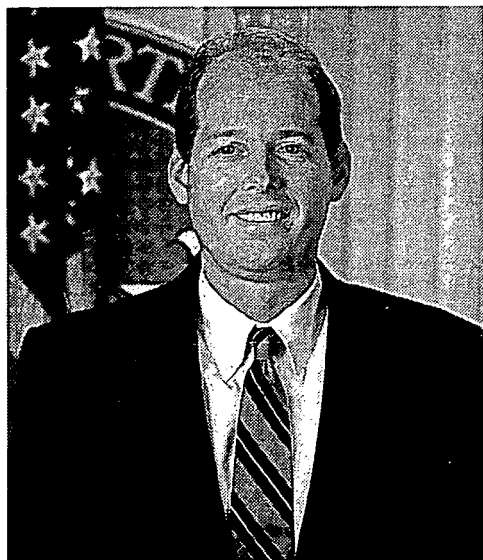
DOE is firmly committed to getting this project up and operational as quickly and safely as possible. We are also pursuing the acceleration of IT's scheduled mobilization date from July 15, 1998, to an earlier date, to take advantage of good weather conditions.

In May, I met with John Bradburne, president and CEO of Fluor Daniel Fernald and Anthony DeLuca, president and CEO of IT, to affirm DOE's commitment to this project. Our goal is the completion of a safe, environmentally sound, and fully operational facility by the March 1 deadline. Mr. Bradburne and Mr. DeLuca plan to meet quarterly to review and closely monitor this project.

The remediation of the waste pits will be a long process, but the project has our best resources, people and financial commitment to meet the goals set forth by regulators, neighbors and ourselves.



Jack Craig
Director, DOE-Fernald



On the Cover: Workers put the finishing touches along the new access roadway that services injection/extraction wells in the southern portion of the site (6261D-478).

Fluor Daniel Fernald awarded a contract to Petro Environmental Technologies, Inc, to begin Phase II of the On-Site Disposal Facility (OSDF). The initial award is for one year with two 1-year options. With options, Phase II includes construction of the liner system for Cell 2, excavation of Cell 3 and the capping of Cell 1. The contract focuses on excavation of the Southern Waste Units and placement of soil and debris into Cells 1 and 2. Petro has been at Fernald since May 1997, building Cell 1. Jay Jalovec, DOE-Fernald project manager for the OSDF said, "I was impressed with Petro's performance last year on the first phase of the project and

Contract Awarded for On-Site Disposal Facility

look forward to working with them this year."

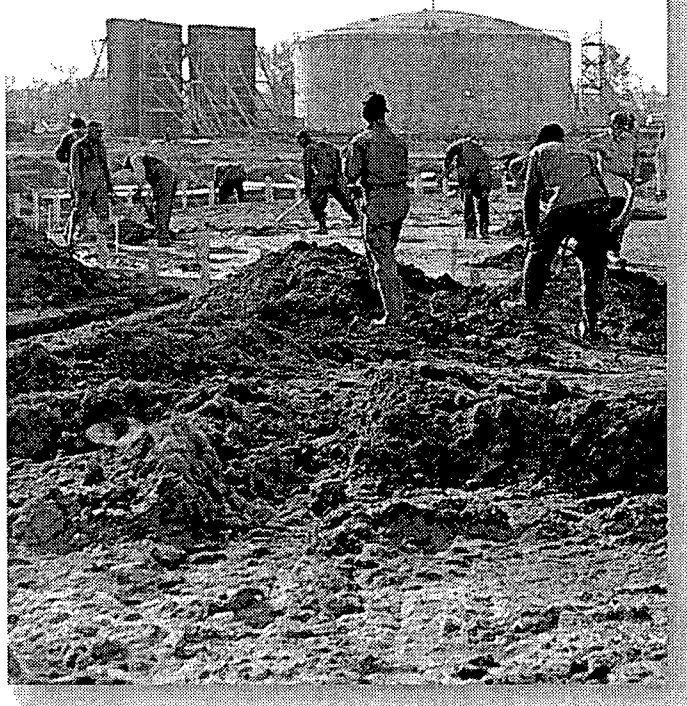
Impacted material from the Southern Waste Units will be transported to the OSDF via the new haul road starting June 22. Approximately 340,000 cubic

yards will be excavated and most of the material will be placed in Cells 1 and 2. Materials above the OSDF waste acceptance criteria will be shipped off-site for disposal. The project is expected to take three years. "Petro has an excellent safety record and has the right qualifications to be an asset to the Fernald cleanup," Jalovec stated.

Below: A soil compactor sits in the foreground as Operating engineers remove soil from the East Stock Pile for placement in Cell 1 of the OSDF (6319D-1220).



Silos Project Contract Awarded



Left: The K-65 Silos were originally built in 1951 for about \$1 million; it will cost roughly \$300 million to remediate them (6335-81).

Fluor Daniel Fernald has awarded contracts to four qualified vendors responsible for testing selected technologies that could be used to remediate Silos 1 and 2. The contracts were awarded two months ahead of schedule and represents the first step toward the final remediation of the silos. This process, which is referred to as Proof-of-Principle testing, is expected to last one year.

The four vendors and technologies selected for the Proof-of-Principle testing are:

- Vitrification - Joule-heated - **EnVitco**
- Vitrification - non-Joule-heated - **Vortec Corporation**
- Chemical Stabilization - Cement based - **IT Corporation**
- Chemical Stabilization - non-Cement based - **Chem-Nuclear**

The Proof-of-Principle testing will be performed at each of the vendors facilities using nonradioactive surrogate material that has the same physical and chemical characteristics as the residue in Silos 1 and 2.

Upon conclusion of the Proof-of-Principle testing, the contractors will submit their reports summarizing the results, including specific information about the safety, reliability, implementability, cost and schedule for each technology. As DOE and Fluor Daniel Fernald receive feedback from the contractors about how the technologies are working, they will evaluate the results with regulators and stakeholders and determine the best approach for the final remediation of Silos 1 and 2.

Cleanup **Progress** Update



Waste Pits Remedial Action Project (WPRAP)

- Completed on-site rail infrastructure construction
- Completed Shandon Yard upgrade
- Continued construction of rail and access road lighting

On-Site Disposal Facility (OSDF)

- Awarded OSDF Phase II/Southern Waste Units excavation subcontract to Petro Environmental Technologies, Inc.
- Began moving containers of debris to OSDF Transfer Area (this activity will continue throughout construction of OSDF)
- Continued construction of Decontamination Facility
- Continued construction of access control and laboratory trailers

Above: Nearly \$10 million has been invested in rail infrastructure improvements supporting the waste pits operation (6349D-1366).

Right: An important part of managing the OSDF is keeping down fugitive dust emissions.

Regulators closely monitor our performance in this area (6319D-1225).

Far right: Workers dig a trench to run utilities for an air sampling station near the OSDF (6319D-1236).



Facilities Closure & Demolition Project (FC&DP)

Safe Shutdown

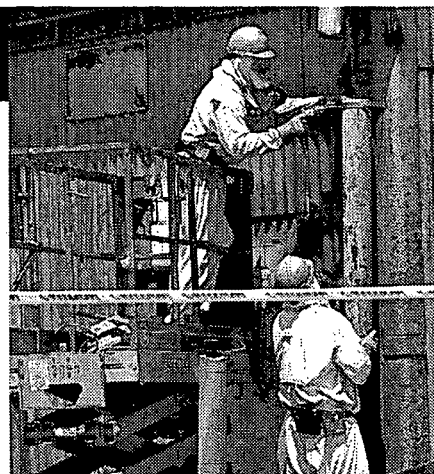
- Plant 2/3 — Continued asbestos removal
- Plant 6 — Continued utility disconnects and biohazard removal
- Non-Nuclear Facilities — Performed various utility disconnects; continued removing equipment from Tank Farm Complex

Decontamination & Dismantlement

- Boiler Plant/Water Plant —
 - ◆ Prepared structural steel surrounding two northern boilers for demolition
 - ◆ Size-reduced and containerized precipitator breeching and support steel
 - ◆ Continued asbestos abatement and transite removal at old Cooling Tower
- Thorium/Plant 9 Complex —
 - ◆ Continued interior dismantlement, equipment and interior transite removal, asbestos abatement, and concrete removal in Plant 9
 - ◆ Began removal of exterior components including pipe bridges conduit in Building 78
 - ◆ Continued interior demolition activities, asbestos abatement, and acid brick removal in Building 69
- Recycling Supplemental Environmental Projects —
 - ◆ Decontaminated and free-released 53 tons of rail as of May 29, 1998
 - ◆ Inspected/prepared containers of shredded copper for shipment to recycling vendor

Silos Project

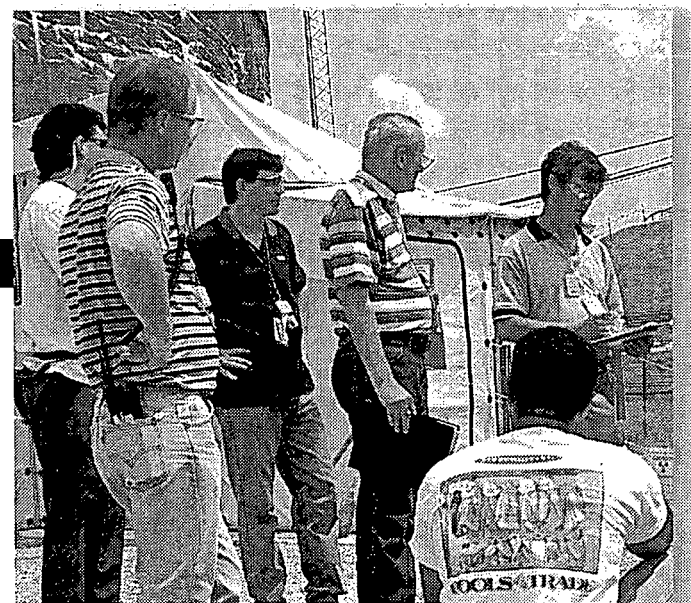
- Submitted *Silo 3 Draft Remedial Design Work Plan* to regulators
- Issued *Silo 3 Request for Proposal (RFP)* to potential contractors for bid on May 6; held pre-proposal conference May 27-28, 1998
- Addressed comments from stakeholders, independent consultants and regulatory agencies on *Accelerated Waste Retrieval Project RFP* and issued the document for bid on May 26, 1998



Left: Foster/Wheeler personnel remove a downspout from the side of Plant 9 as demolition work continues on this project (6494D-234).



Below left: Asbestos workers from the Boiler Plant project continue the delicate task of removing transite from the old Water Cooling Tower (6407D-577).



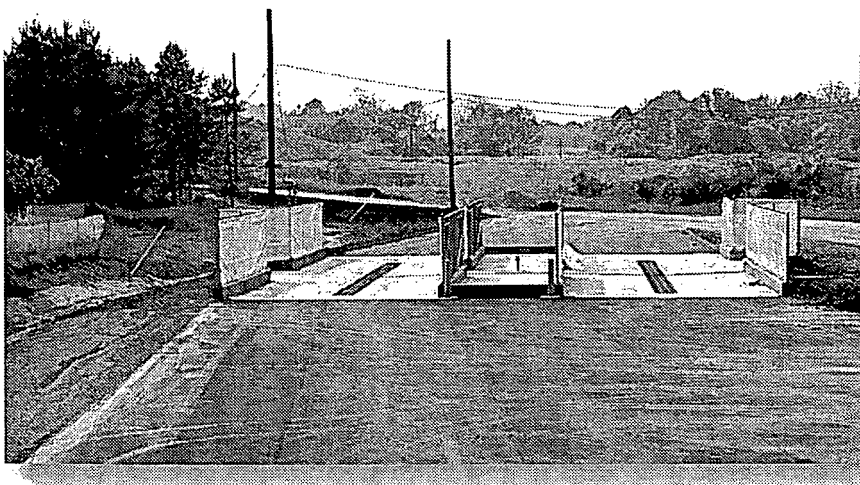
Below: Team members from the Silo 3 Small-Scale Waste Retrieval Project conduct a critique following an emergency preparedness exercise (6759D-238).

Cleanup **Progress** Update

Right:
After completion of work on the injection/extraction wells, Eric Harmon, Soil Characterization Excavation Project, performed topographic surveys of the "borrow area." This dirt will later be used in the OSDF (6261D-461).

Center:
The RTRAK mobile radiation tracking system sends monitoring data from the field back to the quality control data transfer van. Here the RTRAK is being used on the property near Paddy's Run (6846D-060).

Bottom:
This decontamination facility will be used to clean the tires of heavy equipment moving soil along the Haul Road to the OSDF (6734D-611).



Aquifer Restoration & Wastewater Project

- Completed Standard Startup Review of new Sewage Treatment Plant and commenced operations on May 8, 1998
- Completed construction activities for South Field Extraction System/South Plume Optimization System/Injection Demonstration on May 13, 1998

Soil Characterization & Excavation Project

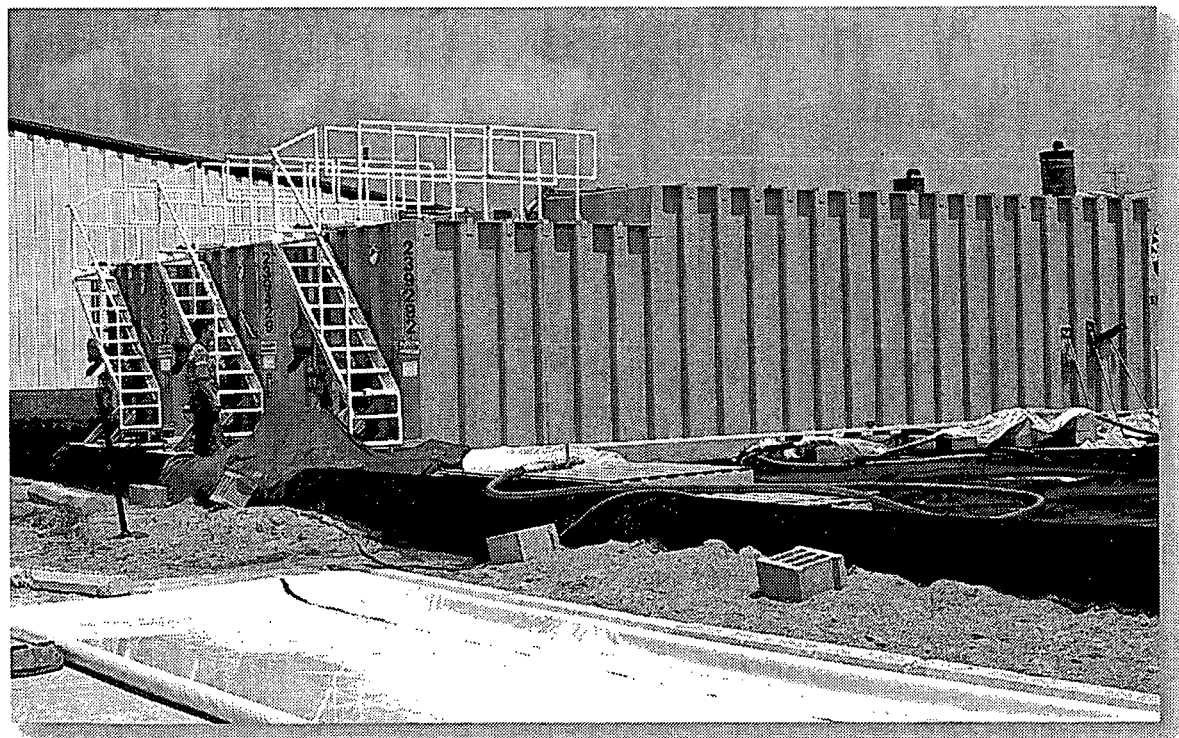
- Initiated bioengineering stabilization of Paddy's Run embankment in the vicinity of the Southern Waste Units retention basins; includes installation of natural-fiber matting to encourage vegetative growth and mitigate embankment erosion
- Completed certification sampling in Area 8, Phase I (13-acre tract of property west of Paddy's Run)
- Submitted Precertification Project Specific Plans for real-time surveys and physical sampling to regulatory agencies for Area 9 Phase I (Northern portion of land located east of Fernald's eastern property line)
- Natural Resource Restoration
 - ◆ Began design of On-Property Public Access Habitat Area
 - ◆ Initiated two Ecological Research subprojects (American Chestnut Restoration and Identification and Control of Invasive Species)
 - ◆ Commenced public involvement process regarding final land use with presentation at May Fernald Residents for Environmental Safety & Health meeting

Waste Management Project

- **Mixed Waste Shipping** — Initiated plan for certification sampling of mixed waste eligible for shipment to a commercial disposal facility
- **Low-Level Waste Certification** — Successfully completed Standard Startup Review for Movement of Above-Grade Debris to OSDF Transfer Area; initiated operations on May 13, 1998
- **Organic Treatment Project** — Began investigating potential off-site treatment options, as well as the possibility of on-site use of thermal desorption technology (i.e., removal of contaminants via heat); continued preparing Request for Proposal for treatment of these PCB-contaminated wastes
- **Operational Readiness Review for Activities Involving Enriched Restricted Materials** — Pre-start items were satisfactorily closed and verified complete on May 14, 1998 with authorization to restart activities on May 20, 1998
- **T-Hopper Repackaging System** — Total of 37 T-Hoppers repackaged as of May 29, 1998



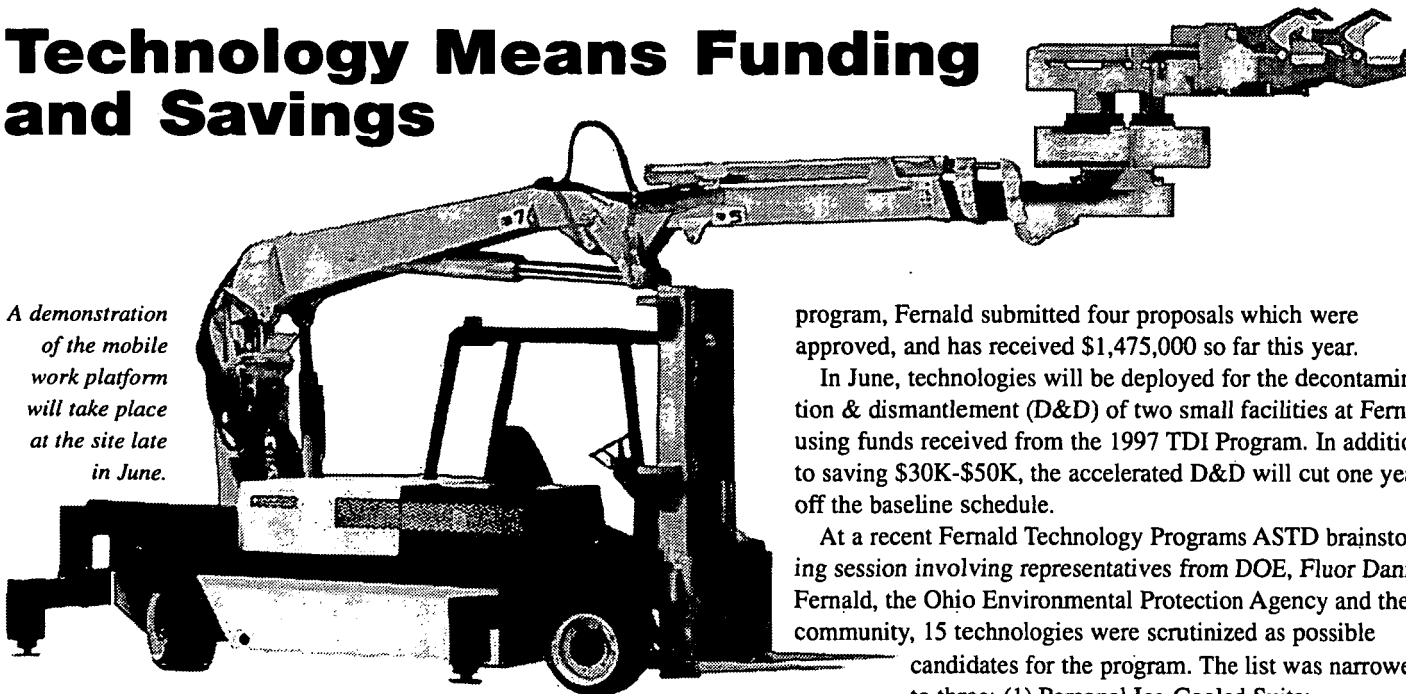
Above:
Steel rail is decontaminated using a grit blaster as part of a Recycling Supplemental Environmental Project (6868D-050).



Left:
These liquid waste bulk containers house batches 7, 8 and 9, which will eventually be shipped to the TSCA Incinerator in Oak Ridge, Tennessee (6898D-001).

Technology Means Funding and Savings

A demonstration of the mobile work platform will take place at the site late in June.



program, Fernald submitted four proposals which were approved, and has received \$1,475,000 so far this year.

In June, technologies will be deployed for the decontamination & dismantlement (D&D) of two small facilities at Fernald using funds received from the 1997 TDI Program. In addition to saving \$30K-\$50K, the accelerated D&D will cut one year off the baseline schedule.

At a recent Fernald Technology Programs ASTD brainstorming session involving representatives from DOE, Fluor Daniel Fernald, the Ohio Environmental Protection Agency and the community, 15 technologies were scrutinized as possible candidates for the program. The list was narrowed to three: (1) Personal Ice-Cooled Suits;

(2) Mobile Work Platform pipe cutting; and
(3) spray-on Asbestos Neutralizing Treatment.

The Office of Science and Technology will review proposals received from the DOE complex, and notification of funding for the selected technologies is expected by the end of July.

The DOE's Office of Science and Technology has updated its Technology Deployment Initiative (TDI) Program and changed its name to Accelerated Site Technology Deployment (ASTD). The purpose of this program is to procure and deploy innovative technologies and measure cost and schedule savings. Last year under the TDI

Communications Program Honored

The International Association of Business Communicators of Greater Cincinnati gave the *Fernald Report* top honors during their recent Bronze Quill Award Competition. Judges commented that this stakeholder-driven publication was "outstanding" in regard to information, photography and design. The International Television Association has also recognized Fluor Daniel Fernald for "Professor Art E. Fact's Archaeological Aptitude Game," an interactive video produced for several local schools featuring resident archeologist Joe Schomaker. A Golden Reel Award was presented at the June 6 Annual ITVA conference in New Orleans.



Above: Fluor Daniel Fernald video production team members included: (from left) Dave Hinaman, director; Joyce Templeton, writer; Walt Saxe, production assistant and Sue Walpole, program designer (not pictured) (6906D-002)